WORKING COPY

TYPE OR PRINT IN BLACK INK (For instructions, see booklet: "How to File an Application to Appropriate Water in California")

APPLICATION NO. A31544 (leave blank)

California Environmental Protection Agency

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000, Sacramento, CA 95812-2000
Tel: (916) 341-5300 Fax: (916) 341-5400
www.waterrights.ca.gov

STATE WATER RESOURCES CONTROL BOARD
2004 SEP 27 AM 11:44 ~~PM 1:35~~
DIV OF WATER RIGHTS SACRAMENTO

APPLICATION TO APPROPRIATE WATER

SECTION A: NOTICE INFORMATION

1. APPLICANT/AGENT

a.

	APPLICANT	ASSIGNED AGENT (if any)
Name	George ARMANINO	JIM STEELE
	MAZZANTI NURSERY	
Mailing Address	PO BOX 805	PO Box 2145
City, State & Zip	PESCADERO CA. 94060	CLEARLAKE OAKS CA 95423
Telephone	(650) 879-0138	CELL- 916 834-6165
Fax		
E-mail		

1/25/06 CR WT

2. OWNERSHIP INFORMATION (Please check type of ownership.)

☐ Sole Owner
☐ Limited Partnership*
☐ Corporation
☐ Limited Liability Company (LLC)
☐ Business Trust
☐ Joint Venture
☐ General Partnership*
☐ Husband/Wife Co-Ownership
☐ Other ______

*Please provide a copy of your partnership agreement.

3. PROJECT DESCRIPTION (Provide a detailed description of your project, including, but not limited to, type of construction activity, area to be graded or excavated, and how the water will be used.)

Supplemental WATER FOR IRRIGATION

☐ *For continuation, see Attachment No.* ___

4. PURPOSE OF USE, DIVERSION/STORAGE AMOUNT AND SEASON

a. PURPOSE OF USE (irrigation, domestic, etc.)	DIRECT DIVERSION				STORAGE		
	AMOUNT		SEASON OF DIVERSION		AMOUNT	SEASON OF COLLECTION	
	Rate (cfs or gpd)*	Acre-feet per year	Beginning date (month & day)	Ending date (month & day)	Acre-feet per year	Beginning date (month & day)	Ending date (month & day)
IRRIGATION	0	0			7	12/15	4/30
		0					

☐ *See Attachment No.* ___

* If rate is less than 0.025 cubic feet per second (cfs), use gallons per day (gpd).

b. Total combined amount taken by direct diversion and storage during any one year will be 7 acre-feet.

c. Reservoir storage is: ☒ onstream ☐ offstream ☐ underground (If underground storage, attach Form APP-UGSTOR.)

d. County in which diversion is located: SAN MATEO County in which water will be used: SAN MATEO

e. Assessor's Parcel Number(s): ______

9-30-04 JDM

5. SOURCES AND POINTS OF DIVERSION/REDIVERSION

a. Sources and Points of Diversion (POD)/Points of Rediversion (PORD):

☒ POD / ☐ PORD # 1: (UNST AKA WEEKS CREEK) tributary to PESCADERO CREEK thence PACIFIC OCEAN

☐ POD / ☐ PORD # ___: ______ tributary to ______ thence ______

☐ POD / ☐ PORD # ___: ______ tributary to ______ thence ______

☐ POD / ☐ PORD # ___: ______ tributary to ______ thence ______

☐ *See Attachment No.* ___

USGS 10/14/05

Resubmitted 9/27/04 $1000 #650

N281,415.34 Zone 3
E 1469,108.4

b. State Planar and Public Land Survey Coordinate Description:

POD/ PORD #	CALIFORNIA COORDINATES (NAD 27)	ZONE	POINT IS WITHIN (40-acre subdivision)	SECTION	TOWN -SHIP	RANGE	BASE AND MERIDIAN
1	~~S 500' And W 800'~~		~~NE ¼ of NE ¼~~	~~8~~	~~8S~~	~~4W~~	~~MD~~
	~~From NE Corner~~		¼ of ¼				
	~~of Sec 8~~		¼ of ¼				
	N ' W ' F/SS CORNER SECTION 5	3 N W	SE ¼ of SW ¼	5	8S	4W	MD

☐ See Attachment No. __

10-6-06 GDM

1/25/06 CE

c. Name of the post office most often used by those living near the proposed point(s) of diversion: Pescadero

6. WATER AVAILABILITY

a. Have you attached a water availability analysis for this project? ☐ YES ☑ NO
If NO, provide sufficient information to demonstrate that there is reasonable likelihood that unappropriated water is available for the proposed appropriation:
EXITS IN RECORD Ed. DiTTo 2/8/02

☐ See Attachment No. __

b. Is your project located on a stream system declared to be fully appropriated by the State Water Resources Control Board during your proposed season of diversion? ☐ YES ☑ NO

c. In an average year, does the stream dry up at any point downstream of your project? ☐ YES ☑ NO If YES, during which months? ☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec

d. What alternate sources of water are available if a portion of your requested diversion season must be excluded because water is not available for appropriation? (e.g., percolating groundwater, purchased water, etc.)
GROUND WATER WELL, SPRING

☐ See Attachment No. __

7. PLACE OF USE

USE IS WITHIN (40-acre subdivision)	SECTION*	TOWNSHIP	RANGE	BASE & MERIDIAN	IF IRRIGATED Acres	IF IRRIGATED Presently cultivated?
NE ¼ of NE ¼	8	8S	4W	MD	15	☑ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
						☐ YES ☐ NO
				Total:		

*Please indicate if section is projected with a "(P)" following the section number.

☐ See Attachment No. __

8. PROJECT SCHEDULE

a. Project is:

☐ proposed. Year construction will begin: ____

☐ partially complete. Extent of completion: ____

☑ complete. Year completed: 1950

b. Year of first use: 1890 Year water will be used to the full extent intended: ____

SECTION B: MISCELLANEOUS DIVERSION INFORMATION

1. JUSTIFICATION OF AMOUNTS REQUESTED

a. ☐ IRRIGATION: Maximum area to be irrigated in any one year: _____ acres.

CROP	ACRES	METHOD OF IRRIGATION (sprinklers, flooding, etc.)	WATER USE (Acre-feet/Yr.)	SEASON OF WATER USE	
				Beginning date (month & day)	Ending date (month & day)
greenhouses — Flowers	6	DRIP	38	All Year	
"	9	SPRINKLER	4	MAY	OCT
	10 15				

☐ *See Attachment No.* ___

12-11-07 JDM

b. ☐ DOMESTIC: Number of residences to be served: _____ Separately owned? ☐ YES ☐ NO
Number of people to be served: _____ Estimated daily use per person is: _____ gallons per day
Area of domestic lawns and gardens: _____ square feet
Incidental domestic uses: _____
(dust control area, number and kind of domestic animals, etc.)

c. ☐ STOCKWATERING: Kind of stock: _____ Maximum number: _____
Describe type of operation: _____
(feedlot, dairy, range, etc.)

d. ☐ RECREATIONAL: Type of recreation: ☐ Fishing ☐ Swimming ☐ Boating ☐ Other _____

e. ☐ MUNICIPAL:

POPULATION List for 5-year periods until use is completed		MAXIMUM MONTH		ANNUAL USE		
Period	Population	Average daily use (gallons per capita)	Rate of diversion (cfs)	Average daily use (gallons per capita)	Acre-foot (per capita)	Total (acre-feet)
Present						

☐ *See Attachment No.* ___

Month of maximum use during year: _____ Month of minimum use during year: _____

f. ☐ HEAT CONTROL: Area to be heat controlled: _____ net acres
Type of crops protected: _____
Rate at which water is applied to use: _____ gpm per acre
Heat protection season will begin _____ and end _____.
(month & day) (month & day)

g. ☐ FROST PROTECTION: Area to be frost protected: _____ net acres
Type of crops protected: _____
Rate at which water is applied to use: _____ gpm per acre
The frost protection season will begin _____ and end _____.
(month & day) (month & day)

h. ☐ INDUSTRIAL: Type of industry: _____
Basis for determination of amount of water needed: _____

i. ☐ MINING: Name of the claim: _____ ☐ Patented ☐ Unpatented
Nature of the mine: _____ Mineral(s) to be mined: _____
Type of milling or processing: _____
After use, the water will be discharged into _____ (watercourse)
in _____ ¼ of _____ ¼ of Section _____, T _____, R _____, _____ B. & M.

j. ☐ POWER: Total head to be utilized: _____ feet
Maximum flow through the penstock: _____ cfs
Maximum theoretical horsepower capable of being generated by the works (cfs x fall ÷ 8.8): _____
Electrical capacity (hp x 0.746 x efficiency): _____ kilowatts at: _____% efficiency
After use, the water will be discharged into _____ (watercourse)
in _____ ¼ of _____ ¼ of Section _____, T _____, R _____, _____ B. & M. FERC No.: _____

k. ☐ FISH AND WILDLIFE PRESERVATION AND/OR ENHANCEMENT: List specific species and habitat type that will be preserved or enhanced in Item 7a of Section C.

l. ☐ OTHER: Describe use: _____
Basis for determination of amount of water needed: _____

2. DIVERSION AND DISTRIBUTION METHOD

a. Diversion will be by gravity by means of: _____
(dam, pipe in unobstructed channel, pipe through dam, siphon, weir, gate, etc.)

b. Diversion will be by pumping from: SUMP
(sump, offset well, channel, reservoir, etc)

Pump discharge rate: 1/4 ☑ cfs or ☐ gpd Horsepower: 5 Pump Efficiency: _____

c. Conduit from diversion point to first lateral or to offstream storage reservoir:

CONDUIT (pipe or channel)	MATERIAL (type of pipe or channel lining; indicate if pipe is buried or not)	CROSS-SECTION (pipe diameter, or ditch depth and top and bottom width) (inches or feet)	LENGTH (feet)	TOTAL LIFT OR FALL		CAPACITY (cfs, gpd or gpm)
				feet	+ or -	
Pipe	PLASTIC	1 1/2	600	40	+	110

☐ *See Attachment No.* ___

d. Storage reservoirs: (For underground storage, complete and attach form APP-UGSTOR)

RESERVOIR NAME OR NUMBER	DAM				RESERVOIR		
	Vertical height from downstream toe of slope to spillway level (feet	Construction material	Length (feet)	Freeboard: dam height above spillway crest (feet)	Surface area when full (acres)	Capacity (acre-feet)	Maximum water depth (feet)
	10'	EARTH	200	3	2	16	7
		SPLASH BOARD					

☐ *See Attachment No.* ___

e. Outlet pipe: Complete for storage reservoirs having a capacity of 10 acre-feet or more.

RESERVOIR NAME OR NUMBER	OUTLET PIPE				
	Diameter (inches)	Length (feet)	Fall: vertical distance between entrance and exit of outlet pipe (feet)	Head: vertical distance from spillway to entrance of outlet pipe (feet)	Dead Storage: storage below entrance of outlet pipe (acre-feet)

☐ *See Attachment No.* ___

f. If water will be stored and the reservoir is not at the point of diversion, the maximum rate of diversion to offstream storage will be 1/4 cfs. Diversion to offstream storage will be made by: ☑ Pumping ☐ Gravity

3. CONSERVATION AND MONITORING

a. What methods will you use to conserve water? Explain.
DRIP SYSTEM IS THE MOST efficient FOR green houses -
ALL SYSTEMS ARE MONITORED DAILY

b. How will you monitor your diversion to be sure you are within the limits of your water right and you are not wasting water? ☐ Weir ☐ Meter ☑ Periodic sampling ☐ Other (describe) _____

4. RIGHT OF ACCESS

a. Does the applicant own all the land where the water will be diverted, transported and used? ☑ YES ☐ NO
If NO, I ☐ do ☐ do not have a recorded easement or written authorization allowing me access.

b. List the names and mailing addresses of all affected landowners and state what steps are being taken to obtain access: _____

☐ *See Attachment No.* ___

5. EXISTING WATER RIGHTS AND RELATED FILINGS

a. Do you claim an existing right for the use of all or part of the water sought by this application? ☑ YES ☐ NO
If YES, please specify: ☑ Riparian ☐ Pre-1914 ☐ Registration ☐ Permit ☐ License
☐ Percolating groundwater ☐ Adjudicated ☐ Other (specify) _____

b. For each existing right claimed, state the source, year of first use, purpose, season and location of the point of diversion (to within quarter- ter section). Include number of registration, permit, l :, or statement of

water diversion and use, if applicable. _____

c. List any related applications, registrations, permits, or licenses located in the proposed place of use or that utilize the same point(s) of diversion? # 30205

☐ *See Attachment No.* ___

6. OTHER SOURCES OF WATER

Are you presently using, or do you intend to use, purchased water or water supplied by contract in connection with this project? ☐ Yes ☐ No If yes, please explain: _____

7. MAP REQUIREMENTS

The Division cannot process your application without accurate information showing the source of water and location of water use. You must include a map with this application form that clearly indicates the township, range, section and quarter/quarter section of (1) the proposed points of diversion and (2) the place of use. A copy of a U.S.G.S. quadrangle/topographic map of your project area is preferred, and can be obtained from sporting goods stores or through the Internet at http://topomaps.usgs.gov. A certified engineering map is required when (1) appropriating more than three cfs by direct diversion, (2) constructing a dam which will be under the jurisdiction of the Division of Safety of Dams, (3) creating a reservoir with a surface area in excess of ten acres or (4) appropriating more than 1000 acre-feet per annum by underground storage. See the instruction booklet for more information.

☐ *See Attachment No.* ___

SECTION C: ENVIRONMENTAL INFORMATION

Note: Before a water right permit may be issued for your project, the State Water Resources Control Board (SWRCB) must consider the information contained in an environmental document prepared in compliance with the California Environmental Quality Act (CEQA). This form is not a CEQA document. If a CEQA document has not yet been prepared for your project, a determination must be made of who is responsible for its preparation. If the SWRCB is determined to be responsible for preparing the CEQA document, the applicant will be required to pay all costs associated with the environmental evaluation and preparation of the required documents. Please answer the following questions to the best of your ability and submit with this application any studies that have been conducted regarding the environmental evaluation of your project.

1. COUNTY PERMITS

a. Contact your county planning or public works department and provide the following information:

Person contacted: _____ Date of contact: _____
Department: _____ Telephone: (____) _____
County Zoning Designation: _____
Are any county permits required for your project? ☐ YES ☐ NO If YES, check appropriate box below:
☐ Grading permit ☐ Use permit ☐ Watercourse ☐ Obstruction permit ☐ Change of zoning
☐ General plan change ☐ Other (explain): _____

b. Have you obtained any of the required permits described above? ☐ YES ☐ NO
If YES, provide a complete copy of each permit obtained.
☐ *See Attachment No.* ___

2. STATE/FEDERAL PERMITS AND REQUIREMENTS

a. Check any additional state or federal permits required for your project:
☐ Federal Energy Regulatory Commission ☐ U.S. Forest Service ☐ U.S. Bureau of Land Management
☐ U.S. Corps of Engineers ☐ U.S. Natural Res. Conservation Service ☐ Calif. Dept. of Fish and Game
☐ State Lands Commission ☐ Calif. Dept. of Water Resources (Div. of Safety of Dams)
☐ Calif. Coastal Commission ☐ State Reclamation Board ☐ Other (specify) _____

b. For each agency from which a permit is required, provide the following information:

AGENCY	PERMIT TYPE	PERSON(S) CONTACTED	CONTACT DATE	TELEPHONE NO.

☐ *See Attachment No.* ___

c. Does your proposed project involve any construction or grading-related activity that has significantly altered or would significantly alter the bed, bank, or riparian habitat of any stream or lake? ☐ YES ☐ NO
If YES, explain: _____

☐ *See Attachment No.* ___

d. Have you contacted the California Department of Fish and Game concerning your project? ☐ YES ☐ NO
If YES, name and telephone number of contact: _____

3. ENVIRONMENTAL DOCUMENTS

a. Has any California public agency prepared an environmental document for your project? ☐ YES ☐ NO

c. If YES, submit a copy of the latest environmental document(s) prepared, including a copy of the notice of determination adopted by the California public agency. Public agency: _____

d. If NO, check the appropriate box and explain below, if necessary:
☐ The applicant is a California public agency and will be preparing the environmental document.*
☑ I expect that the SWRCB will be preparing the environmental document.**
☐ I expect that a California public agency other than the State Water Resources Control Board will be preparing the environmental document.* Public agency: _____
☐ *See Attachment No.* ___

* Note: When completed, submit a copy of the final environmental document (including notice of determination) or notice of exemption to the SWRCB, Division of Water Rights. Processing of your application cannot proceed until these documents are submitted.

** Note: CEQA requires that the SWRCB, as Lead Agency, prepare the environmental document. The information contained in the environmental document must be developed by the applicant and at the applicant's expense under the direction of the SWRCB, Division of Water Rights.

4. WASTE/WASTEWATER

a. Will your project, during construction or operation, (1) generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) cause erosion, turbidity or sedimentation?
☐ YES ☑ NO
If YES, or you are unsure of your answer, explain below and contact your local Regional Water Quality Control Board for the following information (See instruction booklet for address and telephone no.):

☐ *See Attachment No.* ___

b. Will a waste discharge permit be required for your project? ☐ YES ☑ NO
Person contacted: _____ Date of contact: _____

c. What method of treatment and disposal will be used? _____

☐ *See Attachment No.* ___

5. ARCHEOLOGY

a. Have any archeological reports been prepared on this project? ☐ YES ☑ NO

b. Will you be preparing an archeological report to satisfy another public agency? ☐ YES ☑ NO

c. Do you know of any archeological or historic sites located within the general project area? ☐ YES ☑ NO
If YES, explain: _____

☐ *See Attachment No.* ___

6. ENVIRONMENTAL SETTING

Attach **three complete sets of color photographs**, clearly dated and labeled, showing the vegetation that exists at the following three locations:

☐ Along the stream channel immediately downstream from the proposed point(s) of diversion.
☐ Along the stream channel immediately upstream from the proposed point(s) of diversion.
☐ At the place(s) where the water is to be used.
☐ *See Attachment No.* ___

SECTION D: SUBMITTAL FEES

Calculate your application filing fee using the "Water Right Fee Schedule Summary" that was enclosed in the application packet. The "Water Right Fee Schedule Summary" can also be viewed at the Division of Water Rights' website (www.waterrights.ca.gov).

A check for the application filing fee, payable to the "Division of Water Rights" and an $850 check for the environmental review fee, payable to the "California Department of Fish and Game," must accompany this application. All applicable fees are required at the time of filing. Your application will be returned to you if it is not accompanied by all required fees.

SECTION E: DECLARATION AND SIGNATURE

I declare under penalty of perjury that all information provided is true and correct to the best of my knowledge and belief. I authorize my agent, if I have designated one above, to act on my behalf regarding this water right application.

Signature of Applicant	Title or Relationship	Date
	OWNER	9/8/04

Signature of Co-Applicant (if any)	Title or Relationship	Date

"APPLICATION TO APPROPRIATE WATER" CHECKLIST

Before you submit your application, be sure to:

- ☐ Answer each question completely in Sections A, B, and C.
- ☐ Number and include all necessary attachments.
- ☐ Include a legible map that meets the requirements discussed in the instruction booklet (Item B6).
- ☐ Include the Water Availability Analysis or sufficient information to demonstrate that there is reasonable likelihood that unappropriated water is available for the proposed appropriation (Item A6).
- ☐ Include three complete sets of color photographs of the project site (Item C6).
- ☐ Enclose a check for the required fee, payable to the Division of Water Rights, as specified in Section D.
- ☐ Enclose a $850 check for the environmental review fee, payable to the Department of Fish and Game, as specified in Section D.
- ☐ Sign and date the application in Section E.

Send the original and one copy of the entire application to:

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, CA 95812-2000

Environmental Information
For
Supplemental Water Rights Application
Manzzanini Nursery

Project Description:
Project is shown on USGS Quad as Dearborn Park and consists of 29 acres acquired in 1970. Irrigation is supplied to 6 acres of green houses and 9 cultivated acres. Water is supplied from a 16 acre ft pond and sediment basin, well and spring system through plastic pipes. Water use is year round for flower production since 1950's. The supplemental use application will not increase the current amount of water use.

Environmental Setting:
No native fish habitat presently exists on the property. Red legged frog and S.F. garter snake habitat exists around the artificial pond system. The pond system and immediate channel have been extensively modified over a >50 year history of farming use and residential construction. The drainage system presently is approximately 1800 feet long on the Armanino property and consists of open channels, a small sediment filled settling basin, a partially filled ~ 1.8 surface acre reservoir, steel culverts and a concrete lined culvert below the ownership under Pescadero Road (County). Above the ownership are culverts under access roads to neighboring houses. The banks of channel sections are lined with stinging nettles, berries, ferns, sedges, oak trees, buckeye and willows at varying proportions. Some areas have trash and debris left from past projects or dumped as waste.

Upland areas above the pond predominantly contain live oak (*Quercus agrifolia*), buckeye (*Aesculus californica*), and redwood (*Sequoia sempervirons*). In the riparian area the predominant species are willow (*Salix spp*). Pond species are cat-tail (*Typha latifolia*), cyperus (*Cyperus eragrostis*) and pondweed (*Polygonum spp*) and several species of rush. Other wetland species such as horsetail and fern occur on the margins.

Potential Changes to Setting:
No change from past water use or construction hence no changes will occur. No change will occur to downstream species.

State Water Resources Control Board

Division of Water Rights
1001 I Street, 14th Floor • Sacramento, California 95814 • (916) 341-5300
Mailing Address: P.O. Box 2000 • Sacramento, California • 95812-2000
FAX (916) 341-5400 • Web Site Address: http://www.swrcb.ca.gov
Division of Water Rights: http://www.waterrights.ca.gov

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

MEMORANDUM

TO: FILE

Ed Dito

FROM: Ed Dito
Senior Water Resources Control Engineer

DATE: OCT 21 2002

SUBJECT: WATER AVAILABILITY ANALYSIS, ARMANINO APPLICATION 30205, WEEKS CREEK, PESCADERO CREEK WATERSHED, SAN MATEO COUNTY

General. The purpose of this memo is to summarize the results of the water availability analysis prepared for the Armanino Application 30205 located on Weeks Creek, tributary to Pescadero Creek in San Mateo County. This analysis has been prepared in accordance with Water Code sections 1243, 1243.5, 1260(k) and 1375(d) and in accordance the draft guidelines prepared by the National Marine Fisheries Service (NMFS) and the Department of Fish and Game (DFG) dated June 17, 2002, entitled: *Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams*. The primary purposes of this analysis are:

- to determine the percentage impairment to the winter runoff in order to assess the cumulative impacts to anadromous fishery resources within the watershed,
- to determine the minimum fish bypass requirement, and
- to determine whether there is sufficient water available for appropriation without causing injury to downstream water users with prior vested rights

Attachment 1 is a location map that shows the location of the Pescadero Creek watershed, Weeks Creek, Armanino's reservoir, and the location of all recorded water rights within the watershed. Attachment 2 is a U. S. Geological Survey (USGS) topographic map that shows the location of Armanino's existing reservoir on Weeks Creek and the drainage area tributary to the reservoir. Attachment 3 provides a summary of streamflow data for the USGS gage on Pescadero Creek. Attachment 4 provides a summary of existing and proposed diversions within the Pescadero Creek watershed that are located upstream of Weeks Creek.

Application/Project. The original application, dated October 17, 1992, requested a water right permit for the storage of 9 acre-feet per annum (afa) in an existing, on-stream reservoir, with a requested diversion season of December 1 through April 30. Water would be used for irrigation of 9 acres of flowers grown for commercial purposes.

In response to the Division's letter dated March 23, 1999, Armanino has agreed to modify his project consistent with terms designed to protect anadromous fishery resources, specifically, a limitation on the season of diversion, a limitation on the rate of diversion to off-stream storage, and providing a minimum fish bypass flow. Armanino has also modified the project and now proposes to construct two small off-stream reservoirs that would store a total of 9 acre-feet.

Points Under Consideration. For the purpose of this analysis, the winter runoff, diversions, and percentage impairment of the unimpaired winter runoff were determined at five locations:

- Weeks Creek, at Armanino's point of diversion.
- Weeks Creek, at the mouth of Weeks Creek.
- Pescadero Creek, immediately below Weeks Creek.
- Pescadero Creek, at the marsh.
- Pescadero Creek, at the mouth (i.e., the Pacific Ocean).

Runoff – Weeks Creek. The average annual unimpaired runoff within Weeks Creek was determined using the USGS Rationale Runoff Method[1] and the USGS coefficients, using the equation shown below:

Q = k x A x %, where:

Q = Average annual winter runoff from December 15 to March 31.
K = USGS runoff coefficent
A = Area, in acres
% = Percentage of runoff that occurs from Deecember 15 to March 31

Winter Runoff at Armanino's POD

Q = 10/12 x 140 x 0.73 = **85** afa

Winter Runoff at Mouth of Weeks Creek

Q = 10/12 x 161 x 0.73 = **98** afa

Runoff – Pescadero Creek. The winter runoff in Pescadero Creek is based on USGS gage data. As shown on Attachment 1, the USGS gage is located immediately downstream of Weeks Creek, consequently, the runoff in Pescadero Creek at the mouth of Weeks Creek is virtually identical to the runoff as measured at the USGS gage. Pescadero Creek has an average annual winter runoff of 20,873 AF for the winter period (December 15 to March1). The estimated

[1] U. S. Geological Survey, *Mean Annual Runoff in the San Francisco Bay Region, California*, (MF-613). S. E. Rantz, 1974.

average annual runoff at downstream locations in Pescadero Creek is described in a separate memo to file[2]. Those values are shown in Table 1 below.

Diversions – Weeks Creek. Review of the Division's files indicates that Armanino is the only diverter of record on Weeks Creek. Consequently, the diversions that occur between October 1 and March 31 would be 9 AF, the amount of water requested in Armanino's application.

Diversions – Pescadero Creek. Attachment 4 provides a summary of existing and proposed winter diversions within the Pescadero Creek watershed that are located upstream of the USGS gage and Weeks Creek. Estimated winter diversions were determined based on review of information contained in the Division's WRIMS (Water Rights Information Management System). As indicated on Attachment 4, there are a total of 235 afa of diversions during the winter season. Table 1 below provides a summary of the diversions at the downstream locations in Pescadero Creek. The memo to file relating to the water availability analysis for the Pescadero Creek watershed provides a description of those diversions.

NMFS/DFG Percentage Impairment Index. The NMFS/DFG draft guidelines recommend that the cumulative flow impairment index (CFII) be calculated based on the diversions that would occur between October 1 and March 31 and the average annual unimpaired winter runoff that would occur between December 15 and March 31. The NMFS/DFG CFII provides an indication of the potential cumulative impacts to anadromous fishery resources. Table 1 below provides a summary of the runoff, diversions and the NMFS/DFG CFII for the points under consideration in this analysis. Diversions and runoff within the Pescadero Creek watershed, downstream of Weeks Creek, are described in the memo to file relating to the water availability analysis for Pescadero Creek watershed.

Table 1
NMFS/DFG Percentage Impairment of Winter Flow

Location	Diversions (afa)	Runoff (afa)	Percent Impairment
Weeks Creek @ Armanino POD	9	85	**10.6 %**
Weeks Creek @ mouth	9	98	**9.2 %**
Pescadero Creek below Weeks Creek.	235	20,873	**1.1 %**
Pescadero Creek above marsh	542	25,613	**2.1 %**
Pescadero Creek @ ocean	2,784	37,903	**7.3 %**

Discussion of Percentage Impairment Approval of Armanino's application/project would authorize the off-stream storage of 9 afa and would result in a 10.6 % reduction in the unimpaired winter runoff in Weeks Creek at Armanino's point of diversion. All existing and

[2] See memo to file relating to the water availability analysis for the Pescadero Creek Watershed.

proposed diversions, including Armanino's proposed diversion of 9 afa, would result in a 1.1 % reduction in the winter runoff in Pescadero Creek, immediately below Weeks Creek, and a 2.1 % reduction in winter runoff at the mouth of Pescadero Creek.

Determination of Bypass Flow The NMFS/DFG draft guidelines recommend that a minimum bypass flow be provided that is equivalent to the February median daily unimpaired flow. Since there is no streamflow gage data for Weeks Creek and no rainfall gages in the immediate area, the bypass flow was determined based on comparison to data available at the USGS gage on Pescadero Creek, using the equation shown below. This method assumes that the flow regime for Weeks Creek would be identical to the flow regime of Pescadero Creek, as measured at the USGS gage.

$$Q_{bypass} = Q_{feb} \times \frac{Q_{pod}}{Q_{gage}} \quad \textit{where}$$

Q_{bypass} = February median daily bypass flow at Armanino's POD
Q_{feb} = February median daily flow at USGS gage (34 cfs)
Q_{pod} = Winter runoff at Armanino's POD (138 af)
Q_{gage} = Winter runoff at the USGS gage (20,873 af)

$$Q = 34 \times \frac{85}{20{,}873} = \textit{0.14} \text{ cfs}$$

Impact on Prior Rights As indicated above, Armanino would only be allowed to divert 9 afa to storage during the peak winter runoff period, when there is substantial flow in the Pescadero Creek. As indicated on Figure 1, there are relatively few water diverters on Pescadero Creek, downstream of Weeks Creek. Most of those water users would divert water from Pescadero Creek during the summer months for irrigation of crops. Armanino's proposed diversion of 9 afa during the peak winter runoff season would not have any measurable effect on the average winter runoff of 20,000 afa; consequently, Armanino's diversion would not have any significant impact to downstream water users with prior vested rights.

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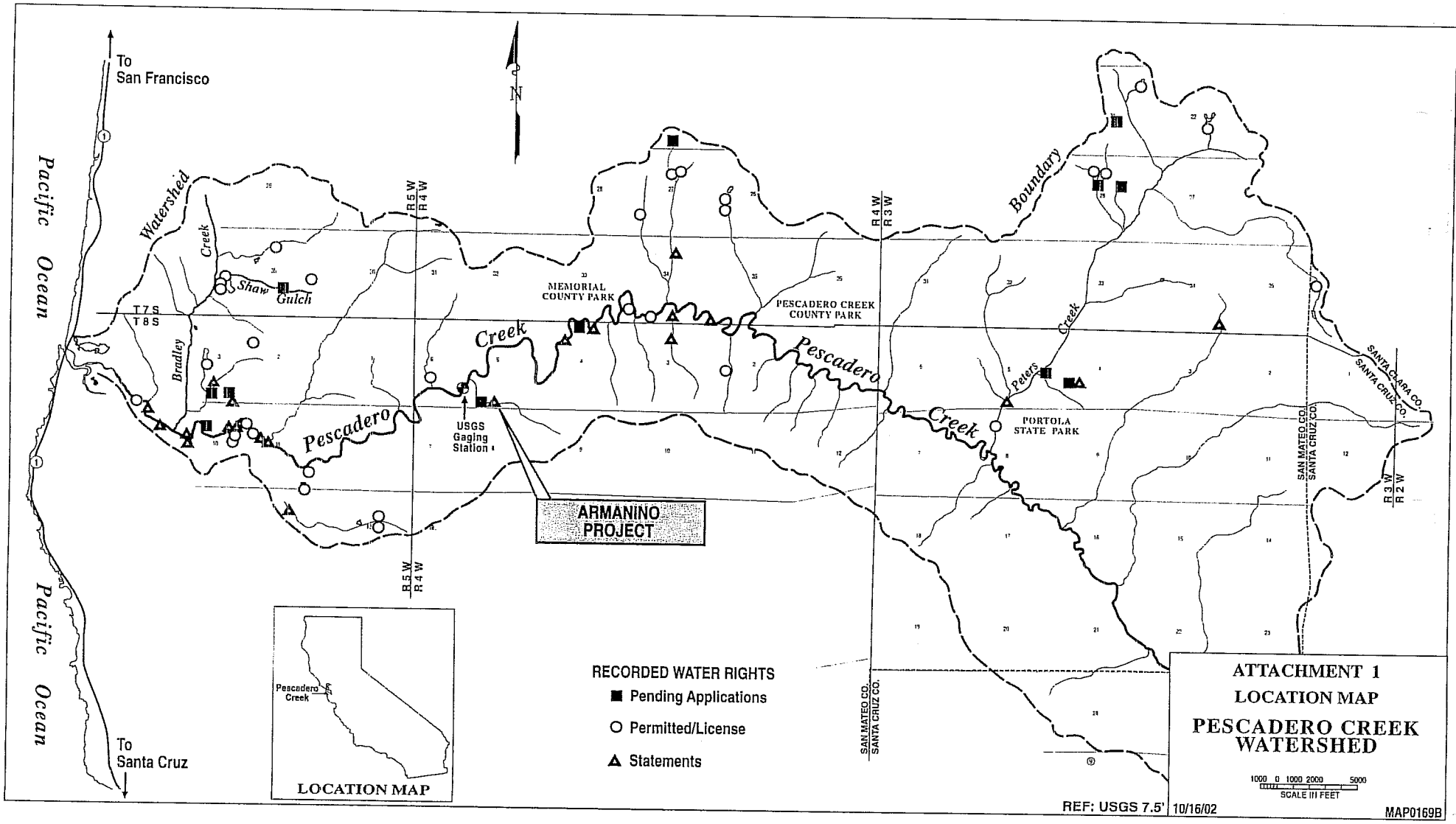
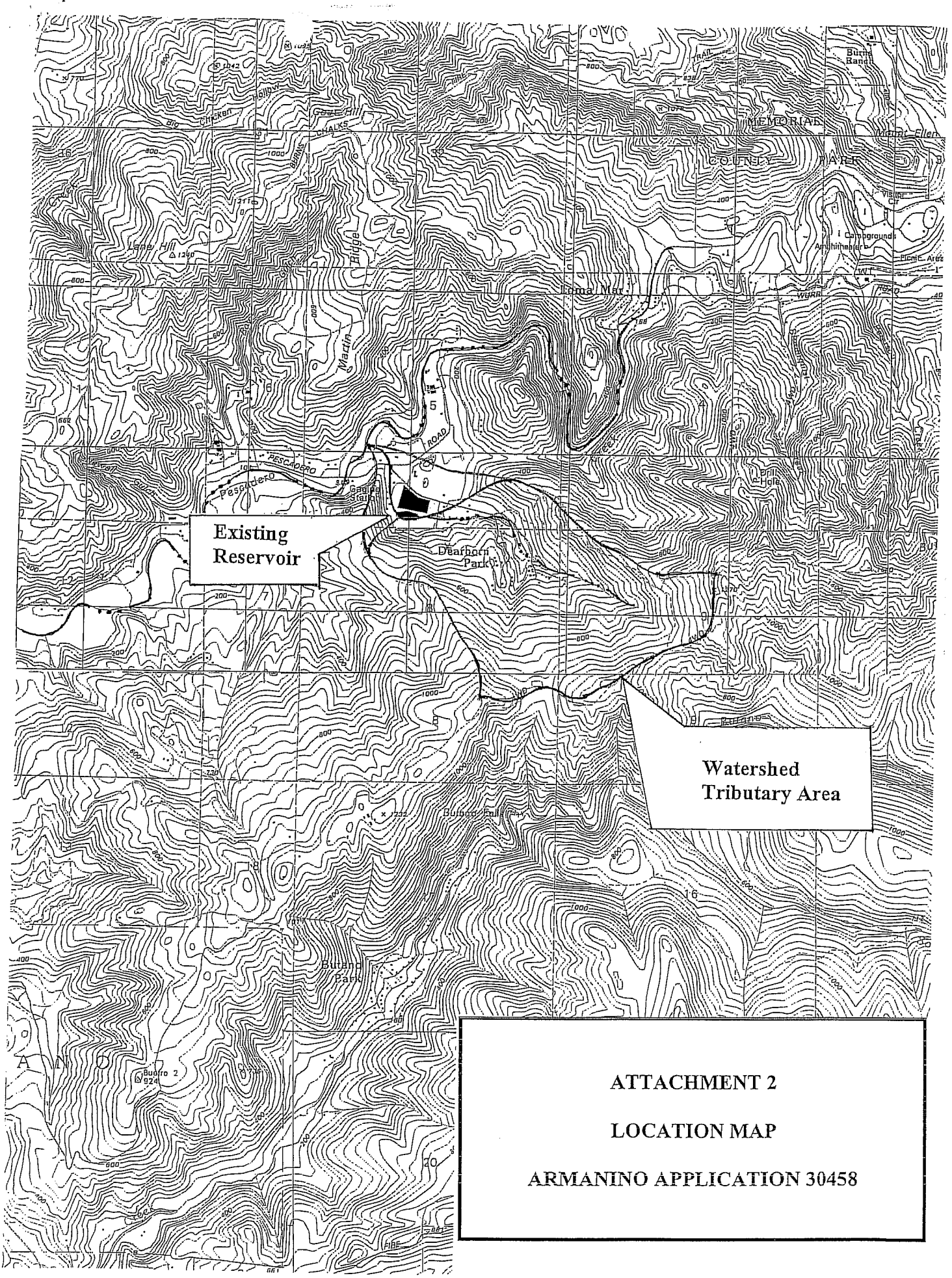

To
San Francisco
Pacific Ocean
Pacific Ocean
To
Santa Cruz
N
Watershed
Creek
Shaw
Gulch
Bradley
T7S
T8S
R5W
R4W
R4W
R3W
Boundary
MEMORIAL
COUNTY PARK
PESCADERO CREEK
COUNTY PARK
Pescadero
Creek
Pescadero
Creek
Peters
Creek
PORTOLA
STATE PARK
USGS
Gaging
Station
ARMANINO
PROJECT
SAN MATEO CO.
SANTA CRUZ CO.
SANTA CLARA CO.
SANTA CRUZ CO.
R3W
R2W
R5W
R4W
SAN MATEO CO.
SANTA CRUZ CO.
Pescadero
Creek
LOCATION MAP
RECORDED WATER RIGHTS
Pending Applications
Permitted/License
Statements
ATTACHMENT 1
LOCATION MAP
PESCADERO CREEK
WATERSHED
1000 0 1000 2000 5000
SCALE III FEET
REF: USGS 7.5'
10/16/02
MAP0169B



ATTACHMENT 2

LOCATION MAP

ARMANINO APPLICATION 30458

ATTACHMENT 3

SUMMARY OF USGS FLOW DATA
PESCADERO CREEK GAGE

Flow Estimates based on Pescadero Crk

Watershed Area above point of interest (mi^2) =	*59.8*	From GIS map
Area above Pescadero Creek gage (mi^2) =	*45.9*	*From USGS gage records*

Flow Statistics at Pescadero Creek Gage	Estimated Value	Units
Average Annual Streamflow at Pescadero Creek Gage =	*28408*	*AF*
% Streamflow Dec 15 - Mar 31 =	*73%*	
Avg Streamflow occuring Dec 15 - Mar 31 =	*20873*	*AF*
% Streamflow occuring Oct 1 - Mar 31 =	*81%*	
Avg Streamflow occuring Oct 1 - Mar 31 =	*22992*	AF
February Median Flow =	34	cfs
15% of 20% Exceedance Flow =	17	cfs

Estimates @ Point of Interest	Estimated Value	Units
February median flow (area-prorated only)	44	cfs
Area between gage and POI	13.9	mi^2
Precip between gage and POI	30	in
Area above POI	59.8	mi^2
Precip above gage	40	in
Mean annual flow at POI (gage plus additional area)	34,840	acre-feet
Dec 15 - Mar 31 flow at POI	25,599	acre-feet
Oct 1 - Mar 31 flow at POI	28,198	acre-feet

Attachment 4
Diversions Upstream of the USGS Gage

App. No	Name	POU	Direct Diversion		Storage		Qty. AF
			Season	Rate	Season	Amt.	
A04104	CA DP&R	BDIS	11/1-6/15	0.028 cfs		0	8
A06250	Mid Penn. Open Space	BDIS	12/1-5/15	0.03 cfs		0	7
A08828	San Mateo Co.	DE	1/1-12/31	0.068 cfs		0	29
A13316	Mid Penn. Open Space	W		0	10/1-5/1	44	44
A16784	Mid Penn. Open Space	W		0	11/1-5/1	30	30
A20995	San Mateo Co.	R	5/15-9/30	7000 gpd	5/15-6/30	5	0
A22150	Gray						10
A23904	SF YMCA	DERS		0	12/1-6/1	20	20
A23905	SF YMCA	DERS		0	12/1-6/1	25	25
A24192	Amer. Baptist Church	D	1/1-12/31	0.42 cfs		0	12
A30205	Armanino	I		0	12/15-3/31	9	9
A30458	PIAMWC	D	12/15-3/31	0.025 cfs	12/15-3/31	2	7
A31030	Mid Penn. Open Space	SW		0	10/1-5/30	4	4
A31031	Wyant Trust	D		0	1/1-3/31	3	3
D29717	Jikoji	D		0	1/1-3/31	2	2
D30184	Watt	D		0	1/1-3/31	2	2
D31099	Echo Valley Coop.	D	1/1-12/31	1525 gpd		0	2
S04385	Loma Mar MW&IC	D	1/1-12/31	0.025 cfs		0	9
S09287	CA DP&R	D	1/1-12/31	19200gpd		0	5
S11560	Werder	D	1/1-12/31	n/a		0	1
S13825	Sherburne Slack	D	1/1-12/31	192 gpd		0	1
S14570	PIAMWC	D	1/1-12/31	0.025 cfs			5
						Total	***235***